

Notice of Allowability

Application No.

10/036,465

Examiner

Wills M Monique

Applicant(s)

LEE ET AL.

Art Unit

1746

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed January 2, 2002.
2. ☒ The allowed claim(s) is/are 1-31.
3. ☒ The drawings filed on 07 January 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☒ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Priority

Korean foreign priority document(s) 2001-667, filed January 5, 2001 and submitted under 35 U.S.C. 119(a)-(d), has NOT been received.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: the instant claims are allowable over the prior art of record, because the prior art is silent to a polymer electrolyte comprising: 0.1 to 90% by weight of a first compound represented by formula 1, a second compound represented by formula 2 or a mixture of the first and second compounds; 0.1 to 90% by weight of a third compound represented by formula 3; and 9.8 to 99.8% by weight of a nonaqueous organic solvent containing 0.5 to 2.0 M of a lithium salt wherein:

Formula 1 is $\text{CH}(\text{R}_1)=\text{C}(\text{R}_2)-\text{C}(=\text{O})\text{O}-\text{R}_3-\text{N}(\text{R}_4)(\text{R}_5)$,

Formula 2 is $\text{CH}(\text{R}_1)=\text{C}(\text{R}_2)-\text{C}(=\text{O})\text{O}-\text{R}_3-\text{CN}$,

Formula 3 is $\text{Z}-(\text{-Y-X-C}(\text{R}_2)=\text{CH}(\text{R}_1))_n$, wherein R_1 through R_5 are defined in claim 1.

The prior art, such as Hasegawa et al. U.S. Patent 5,972,539, teaches a solid electrolyte comprising an ion conductive polymer matrix having moieties derived from

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a halogen or phosphorus-bearing compound and capable of imparting flame retardance to the polymer matrix, wherein the compound may be selected from $(\text{CH}_2=\text{CR}_2\text{COO})_n\text{R}_1$, $(\text{CH}_2\text{CR}_2\text{COO})_n(\text{R}_3\text{O})_m\text{PO}(\text{OR}_4)_{3-m}$ or $(\text{CH}_2\text{C}(\text{R}_2)\text{C}(=\text{O})(\text{R}_3\text{O})\text{P}(=\text{O})(\text{OR}_4)_n\text{OC}(=\text{O})\text{C}(\text{R}_2)=\text{CH}_2$. The reference is silent to a solid polymer electrolyte comprising the compound formulas 1,2 or 3. Therefore, the subsection invention is patentably distinct from Hasegawa.

Conclusions

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

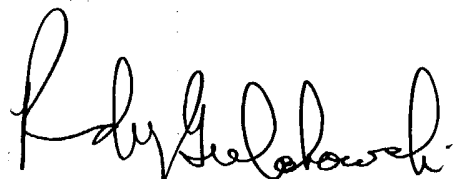
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If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mw

03/06/04


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